Do cough suppressants or honey help pediatric cough?

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Clinical question

Do over-the-counter (OTC) cough suppressants or honey improve cough due to upper respiratory tract infection in children?

Evidence

- Cough suppressants: A 2008 Cochrane systematic review[1] considered 8 RCTs with 616 children, aged 2 to 7 years old. Studies were done primarily in pediatric or primary care clinics and were generally of poor quality (eg, limited assurance of randomization).
  -Outcomes included cough scores, number of patients who were cough free, patient-rated improvement or satisfaction, and parent evaluations.
  -Statistically significant improvements were infrequent, inconsistent, and of doubtful clinical significance.
- Honey: Two RCTs examined the use of honey for cough.
  -The first examined 105 children, mean age 5 (range 2 to 17) years, receiving 1 nighttime dose of honey, dextromethorphan (DM), or nothing.[2]
    —Statistical cough and sleep score improvement was found in all 5, 3-way comparisons: honey was superior to DM, which was superior to receiving no treatment ($P<.001$). In 2 of 5 paired comparisons, honey was superior to receiving no treatment ($P\leq.04$).
    —However, neither honey nor DM produced a study-defined clinically important improvement.
  -The second examined 139 children, mean age 3 (range 2 to 5) years, receiving 1 nighttime dose of honey, DM, or diphenhydramine (DPH), or supportive care.[3]
    —Statistically significant improvement was found in all groups after 24 hours ($P<.001$). Mean improvements were 59% for honey, 45% for DM and DPH, and 31% for supportive care.
    —In paired comparisons between groups, honey was superior ($P\leq.005$) to DM and DPH, which were superior ($P\leq.003$) to supportive care.

Context

- Methodologic issues in honey trials were numerous: randomization not assured,[2,3] no blinding,[3] excluding patients deviating from protocol,[3] substituting clinician ratings in place of parent or child ratings,[3] funding by the Honey Board,[2] and clinical significance not discussed[3] or attained.[2]
- The trials have a high risk of bias.
- Owing to poor evidence of benefit and possible harm, Health Canada[4] recommends that OTC cough suppressants not be used in children younger than 6 years of age.
- Honey should not be used in children aged 1 year or younger owing to risk of infantile botulism.

Bottom line

Cough suppressants should not be used in children younger than 6 years and are likely ineffective in children of any age. Evidence for honey in acute pediatric cough supports a small effect, but clinical significance is uncertain and the risk of bias is high.

Implementation

Physicians are frequently consulted about cough in young children.[5] In particular, parents have concerns about potential serious sequelae and are frustrated by their inability to protect their children.[6,7] Education that addresses parental concerns might help to reduce anxiety and empower caregivers. The Canadian Paediatric Society website has useful information for parents on the use of OTC medication in colds (**www.caringforkids.cps.ca/whensick/OTC_Drugs.htm**), and the American College of Chest Physicians has a detailed patient handout of frequently asked questions about pediatric cough (**http://accpstorage.org/newOrganization/patients/cough/pediatric.pdf**).

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